IN THE SPECIFICATION:

The specification is amended as follows:

Page 1, delete paragraph [0002] and replace it with the following new paragraph:

[0002] The term "patterning device" as here employed should be broadly interpreted as referring to device that can be used to endow an incoming radiation beam with a patterned cross-section, corresponding to a pattern that is to be created in a target portion of the substrate. The term "light valve" can also be used in this context. Generally, the pattern will correspond to a particular functional layer in a device being created in the target portion, such as an integrated circuit or other device (see below). An example of such a patterning device is a mask. The concept of a mask is well known in lithography, and it includes mask types such as binary, alternating phase-shift, and attenuated phase-shift, as well as various hybrid mask types. Placement of such a mask in the radiation beam causes selective transmission (in the case of a transmissive mask) or reflection (in the case of a reflective mask) of the radiation impinging on the mask, according to the pattern on the mask. In the case of a mask, the support ~~structure~~ will generally be a mask table, which ensures that the mask can be held at a desired position in the incoming radiation beam, and that it can be moved relative to the beam if so desired.

Page 1, delete paragraph [0003] and replace it with the following new paragraph:

[0003] Another example of a patterning device is a programmable mirror array. One example of such an array is a matrix-addressable surface having a viscoelastic control layer and a reflective surface. The basic principle behind such an apparatus is that, for example, addressed areas of the reflective surface reflect incident light as diffracted light, whereas unaddressed areas reflect incident light as undiffracted light. Using an appropriate filter, the undiffracted light can be filtered out of the reflected beam, leaving only the diffracted light behind. In this manner, the beam becomes patterned according to the addressing pattern of the matrix-addressable surface. An alternative embodiment of a programmable mirror array employs a matrix arrangement of tiny mirrors, each of which can be individually tilted about an axis by applying a suitable localized electric field, or by employing piezoelectric actuators.

Once again, the mirrors are matrix-addressable, such that addressed mirrors will reflect an incoming radiation beam in a different direction to unaddressed mirrors. In this manner, the reflected beam is patterned according to the addressing pattern of the matrix-addressable mirrors. The required matrix addressing can be performed using suitable electronics. In both of the situations described hereabove, the patterning device can comprise one or more programmable mirror arrays. More information on mirror arrays as here referred to can be seen, for example, from U.S. Patents 5,296,891 and 5,523,193, and WO 98/38597 and WO 98/33096. In the case of a programmable mirror array, the support ~~structure~~ may be embodied as a frame or table, for example, which may be fixed or movable as required.

Page 2, delete paragraph [0004] and replace it with the following new paragraph:

[0004] Another example of a patterning device is a programmable LCD array. An example of such a construction is given in U. S. Patent 5,229,872. As above, the support ~~structure~~ in this case may be embodied as a frame or table, for example, which may be fixed or movable as required.

Page 3, delete paragraph [0008] and replace it with the following new paragraph:

[0008] For the sake of simplicity, the projection system may hereinafter be referred to as the "lens." However, this term should be broadly interpreted as encompassing various types of projection system, including refractive optics, reflective optics, and catadioptric systems, for example. The radiation system may also include components operating according to any of these design types for directing, shaping or controlling the projection beam of radiation, and such components may also be referred to below, collectively or singularly, as a "lens". Further, the lithographic apparatus may be of a type having two or more substrate tables (and/or two or more mask tables). In such "multiple stage" devices the additional tables may be used in parallel or preparatory steps may be carried out on one or more tables while one or more other tables are being used for exposures. Dual stage lithographic apparatus are described, for example, in U.S. ~~Patent~~ Patents 5,969,441 and ~~WO 98/40791~~ 6,262,796.

Page 6, delete paragraph [0019] and replace it with the following new paragraph:

[0019] According to a further aspect of the invention there is provided a lithographic projection apparatus including a radiation system configured to provide a ~~projection~~ beam of radiation, a support configured to support a patterning device, the patterning device configured to pattern the ~~projection~~ beam of radiation according to a desired pattern, a projection system configured to project the patterned beam onto a target portion of the substrate; and an alignment tool as described above.

Page 6, delete paragraph [0020] and replace it with the following new paragraph:

[0020] According to a further aspect of the invention there is provided an alignment method including ~~providing a substrate with a substrate mark which may be at a different level from the rest of the surface of the substrate,~~ providing an alignment beam of radiation, providing an alignment system to project the alignment beam of radiation onto [[the]] a substrate mark which may be at a different level from the rest of the surface of the substrate, and adjusting the focal plane of the alignment beam to focus on the substrate mark at a different level from the rest of the surface of the substrate by interposing an optical element into the alignment beam while detecting alignment.

Page 6, delete paragraph [0022] and replace it with the following new paragraph:

[0022] According to a further aspect of the invention there is provided a device manufacturing method including ~~at least partially covering the substrate with a layer of radiation-sensitive material, providing a patterned projection beam of radiation using a radiation system,~~ projecting [[the]] a patterned beam of radiation onto a target portion of [[the]] a layer of radiation-sensitive material at least partially covering a substrate, and an alignment method as described above.

Page 8, delete paragraph [0039] and replace it with the following new paragraph:

[0039] The source LA (e.g. a UV excimer laser, an undulator or wiggler provided around the

path of an electron beam in a storage ring or synchrotron, a laser-produced plasma source, a discharge source or an electron or ion beam source) produces radiation. The radiation is fed into an illumination system (illuminator) IL, either directly or after having traversed a conditioner, such as a beam expander Ex, for example. The illuminator IL may comprise an adjusting device AM configured to set the outer and/or inner radial extent (commonly referred to as σ-outer and σ-inner, respectively) of the intensity distribution in the beam. In addition, it will generally comprise various other components, such as an integrator IN and a condenser CO. In this way, the ~~projection~~ beam of radiation PB impinging on the mask MA has a desired uniformity and intensity distribution in its cross-section.

Page 9, delete paragraph [0041] and replace it with the following new paragraph:

[0041] In particular, the present invention encompasses embodiments wherein the illuminator IL is configured to supply a ~~projection~~ beam of radiation having a wavelength of less than about 170 nm, such as with wavelengths of 157 nm, 126 nm and 13.6 nm, for example.

Page 9, delete paragraph [0042] and replace it with the following new paragraph:

[0042] The ~~projection~~ beam PB subsequently intercepts the mask MA, which is held on the mask table MT. Having traversed the mask MA, the ~~projection~~ beam PB passes through the lens PL, which focuses the beam PB onto a target portion C of the substrate W. With the aid of the second positioning device PW and interferometer(s) IF, the substrate table WT can be moved accurately, e.g. so as to position different target portions C in the path of the beam PB. Similarly, the first positioning device PM can be used to accurately position the mask MA with respect to the path of the beam PB, e.g. after mechanical retrieval of the mask MA from a mask library, or during a scan. In general, movement of the object tables MT, WT will be realized with the aid of a long-stroke module (coarse positioning) and a short-stroke module (fine positioning). However, in the case of a wafer stepper (as opposed to a step and scan apparatus) the mask table MT may just be connected to a short stroke actuator, or may be fixed. The mask MA and the substrate W may be aligned using mask alignment marks M_1, M_2 and substrate alignment marks P_1, P_2.

Page 9, delete paragraph [0043] and replace it with the following new paragraph:

[0043] The depicted apparatus can be used in two different modes:

1. In step mode, the mask table MT is kept essentially stationary, and an entire mask image is projected at once, i.e. a single "flash," onto a target portion C. The substrate table WT is then shifted in the X and/or Y directions so that a different target portion C can be irradiated by the beam PB;

2. In scan mode, essentially the same scenario applies, except that a given target portion C is not exposed in a single "flash." Instead, the mask table MT is movable in a given direction (the so-called "scan direction", e.g. the Y direction) with a speed v, so that the ~~projection~~ beam PB is caused to scan over a mask image. Concurrently, the substrate table WT is simultaneously moved in the same or opposite direction at a speed V = Mv, in which M is the magnification of the lens PL (typically, M = 1/4 or 1/5). In this manner, a relatively large target portion C can be exposed, without having to compromise on resolution.